



4895 RED BLUFF RD LORIS, SC 29569 (843) 756-4041 / WWW.EVHMFG.COM

OPERATOR'S AND MAINTENANCE MANUAL

WITH PARTS LISTING

MULTI-SPINDLE SERIES CUTTERS

MODELS: T-91126-LT/PT
T-8398-LT/PT
T-8714-LT/PT/MLT/PLT
T-9098-LT/PT
1098W
1098PT
10126W
10126PT
1198W
1198PT
20168W
20168PT

OWNER'S RESPONSIBILITY

The manufacturer has no control over the ultimate use of the cutter and therefore assumes no responsibility of liability for any damage or injury resulting from the use thereof.

The upkeep of the rotary cutter is the responsibility of the user. This upkeep includes all shielding, guards, and safety decals (OSHA Regulation 1928.57). Replacement parts can be obtained from any authorized Hardee Dealer.

Read this Operator's Manual before operating the cutter. Failure to do so could result in injury to the operator or to others. Remember, most accidents occur due to neglect or carelessness. The operator is responsible for inspecting and making repairs as may be necessary. Cleaning after each use and storage under a shelter will extend the life of the cutter.

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TO OUR CUSTOMER

Take the time NOW to read this entire manual before using the cutter.

We at EVH Manufacturing thank you. We feel you have made an excellent choice in your purchase of a Hardee Rotary Cutter.

We have tried hard to build a Cutter to do the work you have in mind. Many hours of engineering, field testing and improvement have gone into the design and workmanship. We will continue this, always keeping in mind the customer's needs.

The best performance of your Cutter will depend on you. Proper lubrication, maintenance, hookup, adjustments and operation are essential for it to give you long and dependable service. However, as with any type of equipment, your Cutter is designed to perform specific functions. It is best used on tractors between 35 and 75 H.P.

In this manual, you will find instructions on all features, including maintenance and operation. Should replacement parts or service be needed, your Hardee Dealer will be able to provide prompt and efficient service. PLEASE SPECIFY MODEL AND SERIAL NUMBER WHEN ORDERING PARTS.

Thank You,
EVH Manufacturing Co.

SPECIFICATIONS

Dimensions (inches)	T-8398-LT/PT	T-91126-LT/PT	T-8714-LT/PT	T-9098-LT/PT
Overall Width Length	101' LT-89"/PT-124"	133" LT-109"/PT-143"	176" LT-112"/PT-146"	101" LT-89"/PT-124"
Cutting Width Height	98" 1-1/4" - 12"	126" 1-1/4" - 12"	168" 1-1/4" - 12"	98" 1-1/4" - 12"
Skids	3/8" X 2"	3/8" X 3"	3/8" X 3"	3/8" X 2"
Blades	1/2" X 3" X 18-3/4"	1/2" X 3-1/2" X 26"	1/2" X 3" X 18-3/4"	1/2" X 3" X 18 - 3/4"
Deck	7 Gauge	7 Gauge	7 Gauge	7 Gauge
Weight (lbs.)	LT-1525/PT-1860	LT-2160/PT-2270	LT-3150/PT-3260	LT-1525/PT-1860
PTO (RPM)	540	540	540/"M" Type 1000	540
Gearbox (H.P.)	75 Trans./40 Side	75 Trans/90 Side	125 Trans. & Side	90 (H.P.)
Tractor Size (Min.)	55 H.P.	75 H.P.	95 H.P.	55 H.P.
Blade Speed	13,854 FPM	17,812 FPM	12,463(¹⁰⁰⁰ RPM) 11,888(⁵⁴⁰ RPM)	10,598.7 FPM
Cutting Capacity	Up to 2"	Up to 2" Dia.	Through 2" Dia.	Up to 2"

SAFETY PRECAUTIONS

DANGER

INCORRECT OPERATION OF THE CUTTER MAY PRODUCE HAZARDOUS SITUATIONS THAT CAN LEAD TO SERIOUS INJURY OR DEATH. THE CUTTER HAS BEEN DESIGNED TO MINIMIZE THE RISKS OF ACCIDENTS, BUT THERE IS NO SUBSTITUTE FOR A CAREFUL OPERATOR.

All shielding, guards and safety decals must be in place at all times while the cutter is in operations. Consult OSHA Regulation 128.57 for further details.

- NEVER operate the cutter when bystanders are in the immediate vicinity!
- NEVER direct the discharge of the cutter at bystanders or at the tractor!
- NEVER operate the cutter in an area where objects can be thrown by the cutter! Clear areas to be cut of all foreign objects before cutting!
- NEVER allow passengers to ride on the cutter or the tractor while cutter or any other implements are operating!
- NEVER dismount the tractor from the rear!
- NEVER allow horseplay in the vicinity of the tractor while the cutter is operating!
- NEVER check the hydraulic system for leaks with bare hands!
- NEVER allow an unqualified or under age person to operate the cutter!
- NEVER allow any person under the influence of drugs or alcohol, or who is otherwise impaired, to operate the cutter!

SAFETY PRECAUTIONS

- NEVER attempt, or have others attempt to remove wire, weeds, cutting or any other foreign objects from the cutter while tractor engine is running or PTO is engaged!
- ALWAYS disengage the PTO, turn off the tractor engine, remove key and wait for all motion to stop BEFORE dismounting the tractor!
- ALWAYS keep hands and feet clear of rotating parts!
- ALWAYS stay alert for signs of danger and possible hazards!
- ALWAYS wear safety goggles when operating cutter!
- ALWAYS check and keep all bolts tight!
- ALWAYS take key out and set parking brake when leaving the tractor!

HYDRAULIC SYSTEM

CAUTION

HYDRAULIC FLUID CAN LEAK FROM THE HYDRAULIC SYSTEM IN AN ALMOST INVISIBLE STREAM WITH ENOUGH PRESSURE TO PENETRATE THE SKIN, CAUSING SERIOUS PERSONAL INJURY. NEVER CHECK HYDRAULIC SYSTEM FOR LEAKS WITH BARE HANDS OR SKIN. HOLD A PIECE OF CARDBOARD OR WOOD NEXT TO THE FITTING OR HOSE TO CHECK FOR HYDRAULIC LEAKS!

SAFETY DECALS AND LOCATIONS — LIFT TYPE CUTTERS

SAFETY DECALS AND LOCATIONS — PULL TYPE CUTTERS

WARNING

IMPLEMENTS CAN FALL FROM HYDRAULIC SYSTEMS FAILURE TO AVOID SERIOUS INJURY OR DEATH:

- ★ BLOCK UP OR SECURELY SUPPORT IMPLEMENT BEFORE WORKING UNDERNEATH.
- ★ PURGE ALL AIR FROM HYDRAULIC SYSTEM BEFORE ATTEMPTING TO RAISE OR LOWER THE IMPLEMENT.
- ★ STAND CLEAR IF LOWERING OR RAISING IMPLEMENT.
- ★ DO NOT USE HAND OR SKIN TO CHECK FOR HYDRAULIC LEAKS, USE CARDBOARD OR WOOD.
- ★ HIGH PRESSURE OIL LEAKS CAN PENETRATE SKIN CAUSING INJURY AND GANGRENE —CONSULT A DOCTOR IMMEDIATELY.
- ★ LOWER THE IMPLEMENT AND RELEASE THE HYDRAULIC PRESSURE BEFORE LOOSENING HYDRAULIC FITTINGS.
- ★ REFER TO THE OPERATORS MANUAL.

HMG-C001

DANGER



KEEP AWAY . . . ROTATING BLADES

SERIOUS INJURY OR DEATH CAN RESULT FROM THROWN OBJECTS OR BLADE CONTACT.

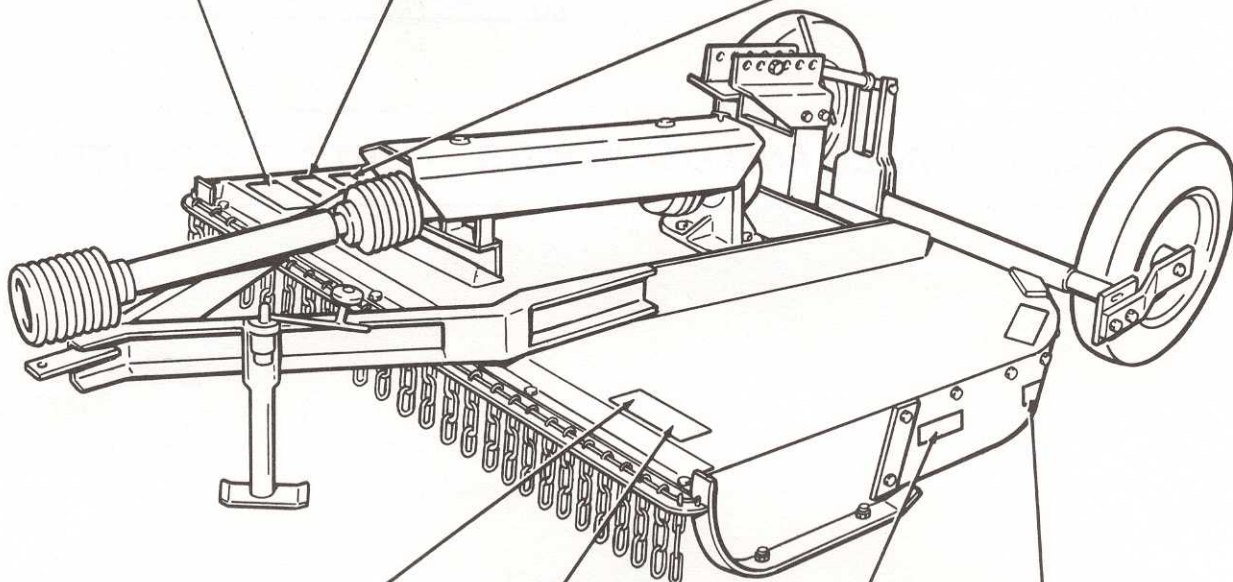
HMG-C001

CAUTION



DO NOT REMOVE SHIELD OR COVER UNTIL DRIVE SHAFT HAS COMPLETELY STOPPED TURNING.

HMG-C002



MODEL NO.

SAFETY INSTRUCTIONS

ALL UNIVERSAL JOINT DRIVES MUST BE SHIELDED, AND ALL GUARDS, AND SHIELDS, MUST BE KEPT IN PLACE, AND IN GOOD CONDITION, TO COMPLY WITH OSHA AG GUARDING STANDARDS.

WHENEVER THIS MACHINE IS OPERATED IN POPULATED AREAS OR IN OTHER AREAS WHERE THROWN OBJECTS COULD INJURE PERSONS OR PROPERTIES, SAFETY CHAIN SHIELDING, TO REDUCE THE POSSIBILITY OF THROWING OBJECTS, MUST BE INSTALLED.

HMG-C004

WARNING



WHENEVER THIS MACHINE IS OPERATED IN POPULATED AREAS OR IN OTHER AREAS WHERE THROWN OBJECTS COULD INJURE PERSONS OR PROPERTIES, SAFETY CHAIN SHIELDING, TO REDUCE THE POSSIBILITY OF THROWING OBJECTS, MUST BE INSTALLED.

HMG-C003

"DANGER"
KEEP CLEAR
WHEN CUTTER IS IN MOTION

SECTION 1 PREPARATION FOR USE VISUAL INSPECTION CHECK

DANGER

NEVER ATTEMPT ANY CHECKS, REPAIRS OR ADJUSTMENTS WITH THE TRACTOR ENGINE RUNNING OR THE POWER TAKE-OFF ENGAGED. ADJUSTMENT OR ROTATING PARTS WHILE THE TRACTOR ENGINE IS RUNNING CAN RESULT IN SERIOUS PERSONAL INJURY OR DEATH IF THE PTO ACCIDENTALLY ENGAGES!

Gearbox Lube Level

The gearbox is filled with lubricant at the factory. If a shaft seal or cover gasket is damaged, the lubricant will leak. After periods of heavy use (at least every 10 hours of operation) or if lubricant leaks are observed, check the lubricant level.

- Position cutter on a level surface.
- Disconnect driveshaft from gearbox.
- Remove gearbox lubricant level inspection plug and check lubricant level. Lubrication should be at or near the hole.
- If lubricant is low, remove gearbox filler plug and add SAE 85-140 lubricant until the lubricant starts to flow from level inspection hole. DO NOT OVERFILL!
- Replace lubricant level inspection plug and filler plug.

NOTE: DO NOT OPERATE THE CUTTER WHEN LUBRICANT LEVEL IS LOW. Replace damaged seals or gasket and add lubricant to the correct level. DO NOT OVERFILL.



Checking Gearbox Lubricant Level

Blade and Blade Holder Condition

- Lift and support cutter by an approved means.

DANGER

LIFT AND SUPPORT CUTTER BY APPROVED MEANS ONLY. THE CUTTER WEIGHS OVER 800 POUNDS AND CAN CAUSE SEVERE PERSONAL INJURY OR DEATH IF IT FALLS ON THE OPERATOR DURING MAINTENANCE. SUPPORT THE CUTTER WITH A SUPPORTING DEVICE RATED FOR AT LEAST 1200 POUNDS!

- Check cutting blades for sharpness and condition. Replace worn cutter blades in pairs only. Sharpen dull cutter blades in pairs only.

NOTE: It is good practice to weigh blades after sharpening to ensure balance.

DANGER

EXCESSIVELY WORN OR DULL CUTTER BLADES, OR THE REPLACEMENT OR SHARPENING OF ONE (1) BLADE, CAN CAUSE EXCESSIVE CUTTER VIBRATION, RESULTING IN DAMAGE TO THE GEARBOX AND STRUCTURAL DAMAGE TO THE CUTTER. EXCESSIVE VIBRATION CAN CAUSE ROTATING PARTS TO BREAK AND FLY OFF THE CUTTER, CAUSING SERIOUS PERSONAL INJURY OR DEATH TO THE OPERATOR OR BYSTANDER.

- Lock blade holder so it will not turn.
- Remove blade holder shaft cotter pin.
- Check blade holder nut for tightness. Tighten as required.

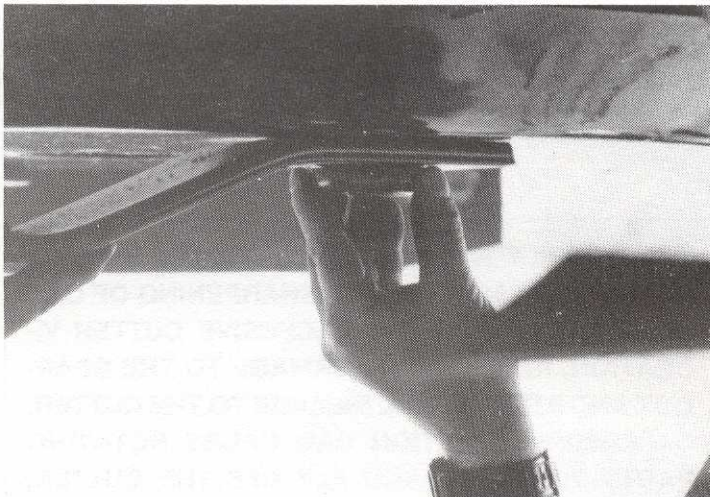
DANGER

A LOOSE BLADE HOLDER SHAFT NUT CAN CAUSE THE SHAFT TO BREAK, CAUSING THE HOLDER TO FLY OUT, DAMAGING THE CUTTER AND CAUSING SERIOUS PERSONAL INJURY OR DEATH TO THE OPERATOR OR BYSTANDERS. BE SURE THAT THE NUT IS TIGHT ON THE SHAFT AND THE COTTER PIN IS SECURELY IN PLACE.

- Replace blade holder shaft cotter pin.
- Remove supporting devices and lower cutter.

Blade Attaching Hardware

- Rotate blade bolt cover (on top cutter deck in front or beside gearbox) from over access hole.
- Turn blade holder to position blade bolt under access hole.
- Tighten blade bolt.
- Turn blade holder to position second blade bolt under access hole.
- Tighten blade bolt.
- Rotate blade bolt access cover over access hole.



Checking Blade Bolts

Skid Condition

- Check skids for wear and tightness, replace skids less than 1/16" thick.

Decal Condition

Check all decals for position and legibility before attaching the cutter to the tractor. Replace all decals that have been removed, damaged or destroyed, see the safety section for decal locations.

ATTACHMENT

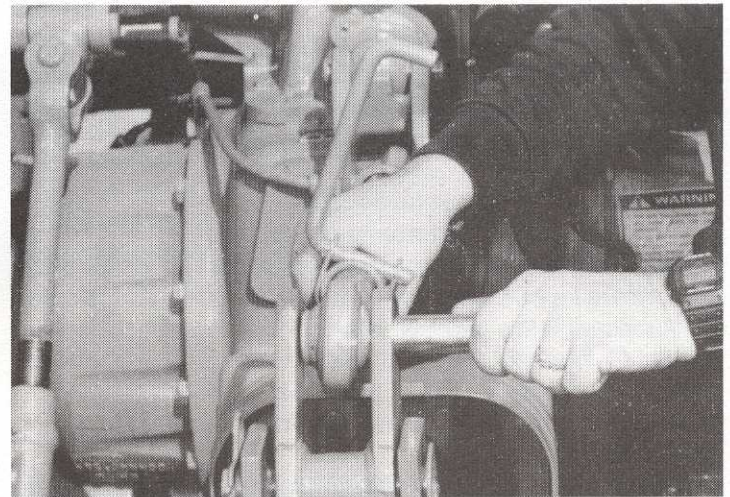
Three-Point Hitch (Lift Type Cutter)

- Position tractor in front of cutter so that tractor hitch arms are in line with cutter hitch.
- Connect tractor lower hitch arms to cutter hitch points and lock pins in place.



Positioning Tractor for Hitching

- Connect tractor op hitch link to floating linkage on cutter hitch.



Positioning Hitch Upper Arm

Drawbar (Pull Type Cutter)

Adjust the tractor drawbar so that the hole is 14 inches behind the end of the PTO shaft and parallel to the tractor centerline. The vertical distance for the drawbar centerline to the drive-shaft centerline should be 8 to 15 inches.

- Back tractor until drawbar is in line with cutter hitch.
- Connect cutter to tractor drawbar with a 1 inch drawbar pin.
- Connect cutter hydraulic system (if used) to tractor auxiliary hydraulic system.
- Lower cutter's front jack all the way down.

HYDRAULIC SYSTEM (OPTIONAL)

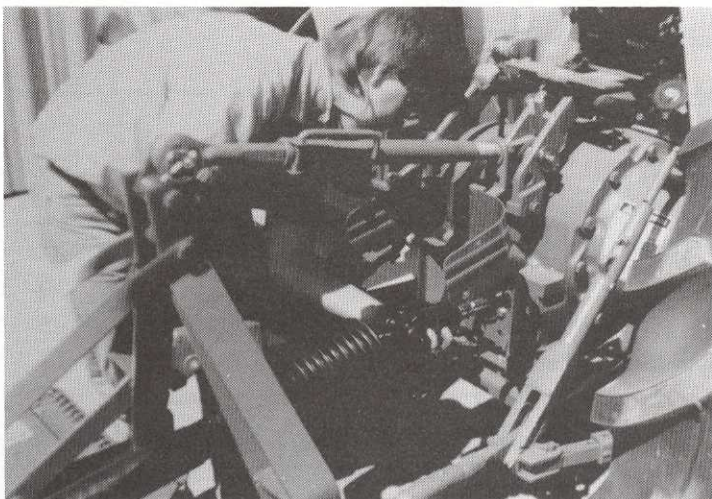
- Be sure that all hydraulic connections are tight before connecting cutter to tractor.
- Be sure all hydraulic lines and hoses are in good condition before pressurizing hydraulic system.
- Be sure that the tractor hydraulic system is full before operating cutters hydraulics.

Driveshaft

DANGER

NEVER ATTACH THE CUTTER TO A 1000 RPM PTO UNLESS YOU HAVE A "M" TYPE CUTTER. OPERATING ANY CUTTER ABOVE IT'S RATED RPM COULD RESULT IN SEVERE DAMAGE TO THE CUTTER, AND IN PARTS FLYING OFF THE CUTTER RESULTING IN SEVERE PERSONAL INJURY OR DEATH TO THE OPERATOR OR BYSTANDERS.

- Lift tractor PTO guard.
- Pull U-joint guard back along driveshaft.
- Press driveshaft yoke plunger in and slip driveshaft U-joint yoke onto splined PTO shaft. Check that plunger returns to locked position.



Installing Driveshaft on Tractor Power Take-off

- Position U-joint guard over driveshaft U-joint.
- Lower tractor PTO guard.

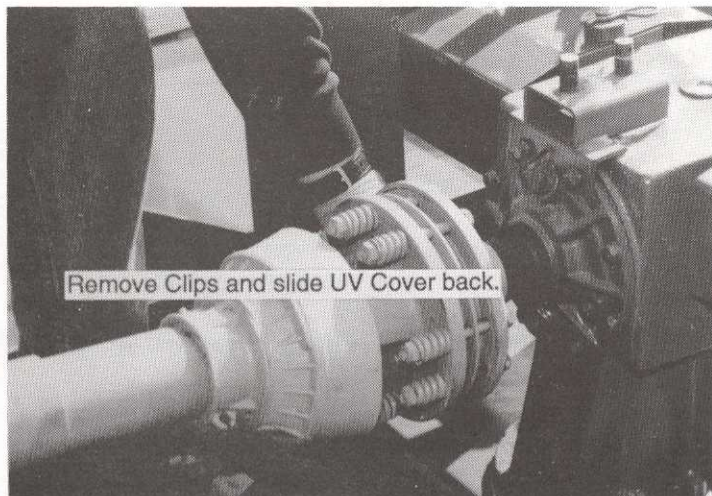
ADJUSTMENT Slip Clutch

Cutters are equipped with a slip clutch on the driveshaft to protect the tractor and cutter drivetrain parts from sudden overloads. When properly adjusted, the clutch will slip to relieve excess loads and automatically reset itself without interrupting the cutting operation. To compensate for clutch plate face wear and to maintain capacity during continuous use, the slip clutch must be adjusted periodically. Adjust the slip clutch at the beginning of each use, and when the cutter has been idle for extended periods.

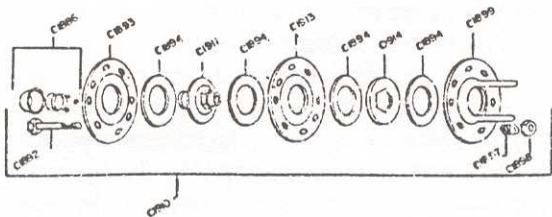
DANGER

NEVER ATTEMPT ANY REPAIRS OR ADJUSTMENTS WITH THE TRACTOR ENGINE RUNNING OR THE POWER TAKE-OFF ENGAGED. ADJUSTMENT OR ROTATING PARTS WHILE TRACTOR ENGINE IS RUNNING CAN RESULT IN SERIOUS PERSONAL INJURY OR DEATH IF THE PTO ACCIDENTALLY ENGAGES.

- Remove slip clutch safety shield by removing retaining clip and sliding shield back along driveshaft.

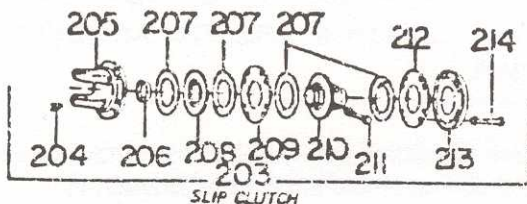


Removing Slip Clutch Safety Shield



T- 8398-LT/PT T-91126-LT/PT

Slip Clutch



T- 8714 -LT/PT

Slip Clutch

- Loosen slip clutch adjusting nuts.
- Check clutch plate assembly. Free plates by lightly tapping on flat edges of drive plates if required.

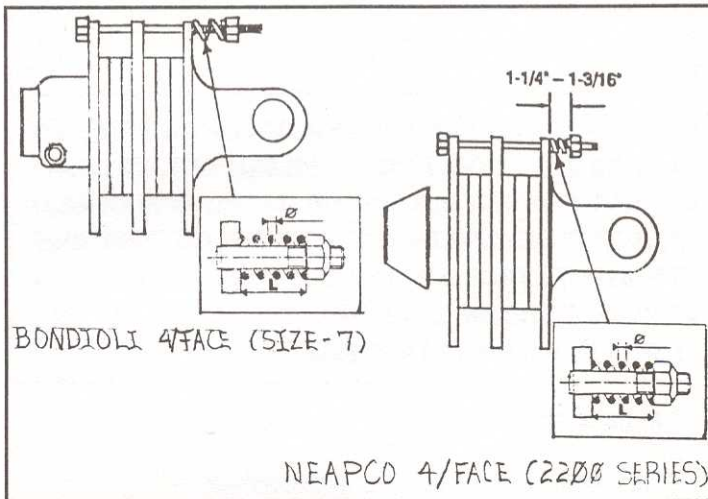
NOTE: Slip clutches have a tendency to seize if left idle for extended periods.

DANGER

BE SURE THAT ALL BYSTANDERS ARE CLEAR OF THE CUTTER BEFORE THE TRACTOR ENGINE IS STARTED. OBJECTS THROWN BY THE CUTTER CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.

- Start tractor engine and engage power take-off at low RPM for one or two seconds to remove any rust or other foreign material between the slip clutch plates.

- Disengage PTO and turn off tractor engine. Be sure that all rotary motion has stopped and remove key before dismounting tractor.
- Remove clutch safety shield.
- Tighten clutch adjusting nuts alternately & evenly 1-1/2 turns at a time until springs (C1987) have compressed to between 1-1/4" - 1-3/16" in length. If plates still can be rotated by hand when springs are compressed to the limit, new plates must be installed.



Clutch Plate Adjustment Detail

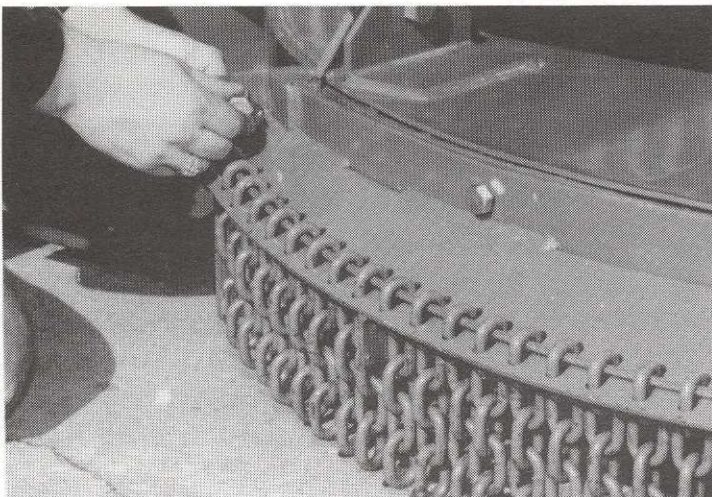
NOTE: Replace shield after adjustments are complete.

Cutting Height

DANGER

THE CUTTER MUST BE OPERATED LEVEL AT ALL TIMES TO MINIMIZE THE RISK OF OBJECTS BEING THROWN OUT FROM UNDER THE CUTTER. OBJECTS THROWN BY THE CUTTER CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.

SAFETY CHAIN SHIELDING OR SAFETY BELTING ARE HIGHLY RECOMMENDED TO MINIMIZE THE DANGER OF OBJECTS BEING THROWN OUT FROM UNDER CUTTER. SAFETY CHAINS AND BELTING BOTH ARE AVAILABLE FROM HARDEE MFG. OR AND AUTHORIZED HARDEE DEALER OR DISTRIBUTOR.



Safety Chain Accessory Installation
Belting Accessory Installation Similar
Similar Installation for Front Chain Guard & Belting



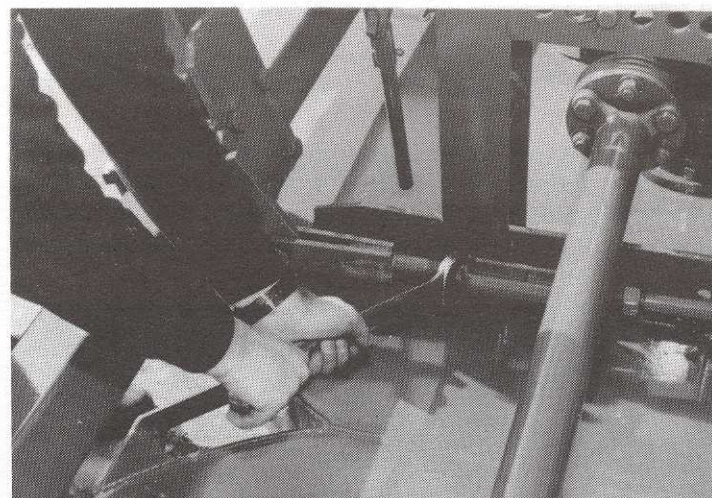
Height Adjustment (Pull Type Cutter)
Measuring

Leveling Lift Type Cutter

Hook cutter to tractor, transport cutter to level area if not at one already. Lower cutter to about six (6) inches above the ground. If not level adjust third arm of tractor until front and rear of cutter are equal heights above the ground.



Leveling (Lift Type Cutter)



Height Adjustment (Pull Type Cutter)
Adjusting Turnbuckles

Leveling Pull Type Cutter

For initial hook-up and leveling, hook cutter tongue to tractor's drawbar, if they do not align use tongue jack to move the tongue. Make sure that the two parking stands are in the up position. After hook-up is achieved, if optional hydraulic cylinder is used, connect hydraulic lines to tractor. Make sure hoses and fittings are tight and in good condition. Raise cutter with ratchet jack or with optional hydraulic cylinder to travel height and move cutter to a level area if not already at one. Once at a level area, lower cutter to about six (6") inches above the ground. Now measure deck height at the front of the cutter and the rear of the cutter to check for differences in height. If heights are within a half inch difference, install drive shaft and sheilds and proceed with cutting. If heights are off more than a half inch, you must adjust leveling turnbuckles. To do so, block cutter at side skids about six inches (6") above the ground to take pressure off the turnbuckles. To raise front

DANGER

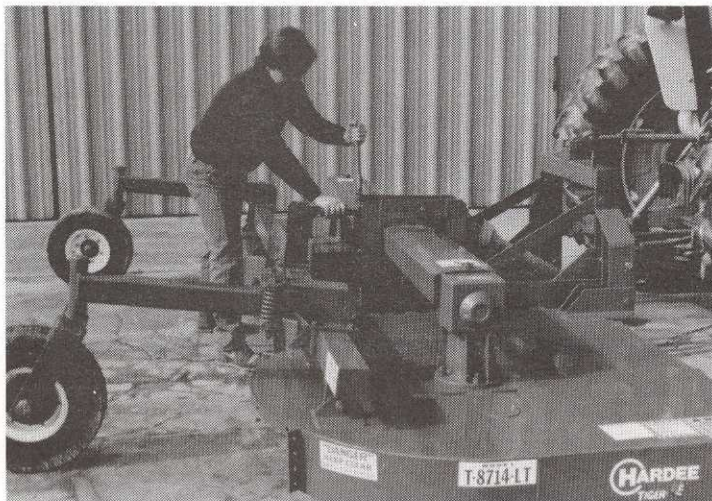
TO MINIMIZE THE POSSIBILITY OF PERSONAL OR MECHANICAL INJURY FROM OBJECTS BEING THROWN FROM UNDER CUTTER, IT MUST BE OPERATED LEVEL AT ALL TIMES.

of cutter, shorten rod length, to lower front of cutter lengthen rod length. Loosen lock nuts and start adjusting turnbuckles. Note you must adjust turnbuckles in equal increments so one will not bind the other. After adjusting turnbuckles, remove blocks and measure heights again. If cutter is still not level, repeat process again, until level is achieved. When cutter is level, install drive shaft and sheilds and proceed with operation. When cutting is completed, and cutter is ready for unhooking, lower parking stands to a height that would allow tractor to easily reconnect to cutter. Tongue jack may be needed to allow parking stands to line up parking stand holes.

This is an initial adjustment for parallel lift operation and need not be repeated as long as the cutter is used with a tractor having the same drawbar height.

Adjusting Cutting Height (Lift and Pull Type)

Cutting height is achieved by using the ratchet jack (C945) or by the optional hydraulic cylinder. If ratchet jack is used, jack cutter down until it is about two (2) inches above the ground. This is recommended cutting height. In loose or moist soil additional clearance may be needed.



Adjusting Cutting Height

If hydraulic cylinder is used, lower cutter to two (2) or three (3) inches above the ground. With the hydraulic cylinder two (2) spacer are supplied, in two (2) different sizes. Measure the space between cylinder body and the stop. Use spacer that comes closest to fitting and this will lock your cutter at the working cutting height. For more height add spacers.

DANGER

CUTTING WITH CUTTER TOO HIGH ABOVE THE GROUND WILL CAUSE DEBRIS TO BE THROWN FROM UNDER CUTTER, CAUSING SERIOUS PERSONAL INJURY TO OPERATOR OR BYSTANDERS. MAKE SURE CUTTER IS AT RECOMMENDED HEIGHT AT ALL TIMES WHEN CUTTER IS BEING OPERATED.

SECTION 2 OPERATION

CAUTIONS

DANGER

INCORRECT OPERATION OF THE CUTTER MAY PRODUCE HAZARDOUS SITUATIONS THAT CAN LEAD TO SERIOUS INJURY OR DEATH. THE CUTTER HAS BEEN DESIGNED TO MINIMIZE THE RISKS OF ACCIDENTS, BUT THERE IS NO SUBSTITUTE FOR A CAREFUL OPERATOR.

NOTE: See SAFETY PRECAUTIONS in the Introduction section for a list of safety related cautions to be observed while operating the cutter.

Lights, SMV Emblems

If operating along public roads, warning lights and or slow moving vehicle emblems should be used unless prohibited by law. Check local and state codes.

Low Speed

Slow the tractor down when approaching trees, fences, ditches or other obstacles. The flywheel effect of the blade rotation will move some tractors forward after the main drive clutch has been disengaged. To stop forward movement, apply tractor brakes and throttle the engine back to allow the engine to slow the rotor before disengaging the PTO or drive clutch.

NORMAL PROCEDURES

Travelling (Lift Type Cutter)

Raise the cutter to its maximum height when travelling. Additional ground clearance can be obtained by shortening the tractor hitch center arm. NEVER engage PTO while cutter is in travelling position.

DANGER

TRANSPORTING THE CUTTER AT MAXIMUM HEIGHT CHANGES THE CENTER OF GRAVITY OF THE TRACTOR. DO NOT TRAVEL AT HIGH RATES OR SPEED WITH THE CUTTER IN TRAVELLING POSITION, EXPECIALLY OVER ROUGH OR BUMPY TERRAIN. TRACTOR INSTABILITY DURING HIGH SPEED TRAVEL CAN CAUSE A ROLLOVER, RESULTING IN SERIOUS PERSONAL INJURY OR DEATH.



Lift Type Cutter Travelling Position

Travelling (Pull Type Cutter)

Raise the cutter to its maximum height when travelling. To do so use ratchet jack or optional hydraulic cylinder to bring cutter to travelling position.

DANGER

TRANSPORTING THE CUTTER AT MAXIMUM HEIGHT CHANGES THE CENTER OF GRAVITY OF THE TRACTOR. DO NOT TRAVEL AT HIGH RATES OR SPEED WITH THE CUTTER IN TRAVELLING POSITION, ESPECIALLY OVER ROUGH OR BUMPY TERRAIN. TRACTOR INSTABILITY DURING HIGH SPEED TRAVEL CAN CAUSE A ROLLOVER, RESULTING IN SERIOUS PERSONAL INJURY OR DEATH.



Cutter in Travelling Position (Pull Type)

CUTTING

- Watch for holes, rocks, root or other hidden hazards.
- Keep away from Dropoffs.
- Do not cut near the edge of a gully or bank.
- Slow down before turning.
- Engage PTO as directed by tractor manufacturer.

Reverse Operation

Do not operate the cutter in reverse unless absolutely essential.

DANGER

DO NOT OPERATE CUTTER IN REVERSE UNLESS ABSOLUTELY ESSENTIAL AND IT IS ALLOWED BY THE TRACTOR MANUFACTURER. REVERSE OPERATION MAY THROW MATERIAL OUT THE FRONT OF THE CUTTER DURING REVERSE OPERATION, POSING A HAZARD TO THE OPERATOR AND BYSTANDERS. CUT IN REVERSE ONLY IF OPTIONAL SAFETY CHAIN SHIELDING OR SAFETY BELTING ARE INSTALLED ON THE CUTTER.

- Look behind cutter before putting tractor in reverse gear.
- Back tractor at lowest speed available.
- Watch back of cutter at all times while backing.

Slopes

Cut down, not across, steep slopes. Avoid sudden starts and stops. Avoid cutting up steep slopes. Slow down before changing direction on steep slopes.

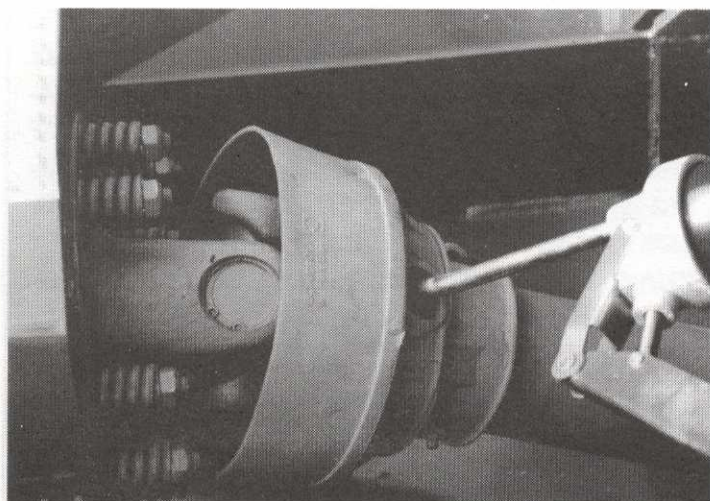
Sharp Turns

When turning with a pull type cutter, be sure that the rear tractor wheels do not strike any part of the cutter. Extremely short turns should be avoided to prevent excessive U-joint wear.

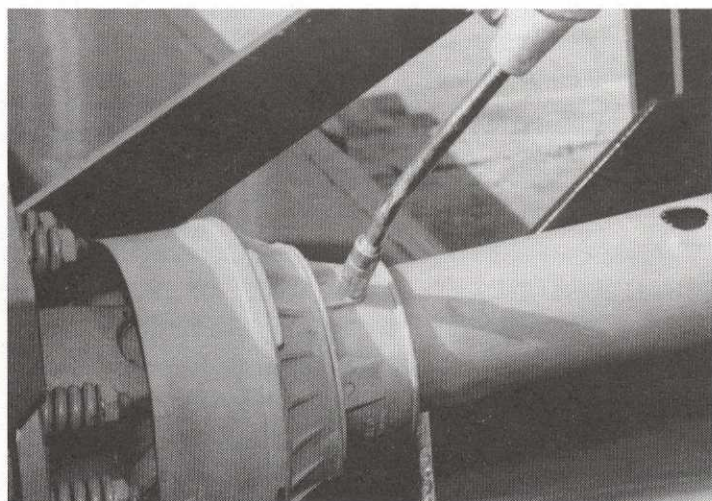
SECTION 3 LUBRICATION

Visually inspect the cutter at least once a week. Lubricate parts with a good lithium "EP" grease at the intervals specified. If heavy or long duration operation is expected, lubricate more frequently. Wipe off excess grease after lubricating.

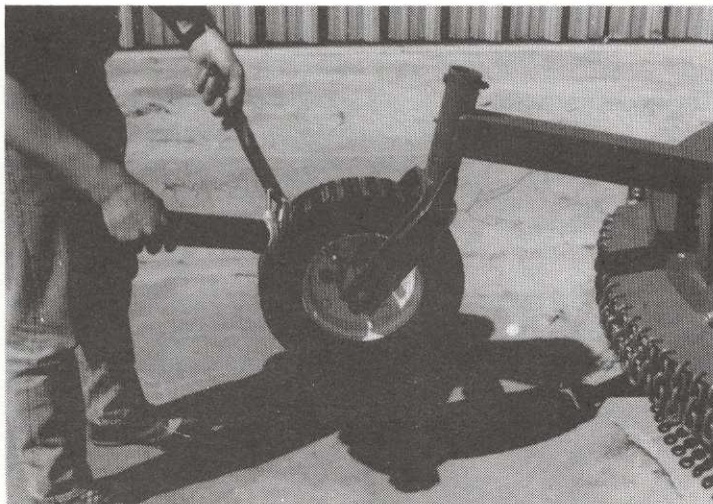
INTERVAL	LIFT TYPE	PULL TYPE
4 Hours	U-joints	U-joints
10 Hours	Driveshaft Slip Joint Tail Wheel Bearings Tail Wheel Pivot	Driveshaft Slip Joint Tailwheel Lift Tube
Yearly		Ratchet jack Wheel Bearings



Lubricating Universal Joints



Lubricating Driveshaft Slip Joints
Both Ends Similar



Lubricating Tail Wheel Bearings



Lubricating Tail Wheel Pivots

SECTION 4 MAINTENANCE

DANGER

NEVER ATTEMPT ANY CHECKS, REPAIRS OR ADJUSTMENTS WITH THE TRACTOR ENGINE RUNNING OR THE POWER TAKE-OFF ENGAGED. ADJUSTMENT OF ROTATING PARTS WHILE TRACTOR ENGINE IS RUNNING CAN RESULT IN SERIOUS PERSONAL INJURY OR DEATH IF THE PTO ACCIDENTALLY ENGAGES.

BLADES

Check Blade Condition

DANGER

EXCESSIVELY WORN OR DULL CUTTER BLADES, OR REPLACEMENT OR SHARPENING OF ONLY ONE CUTTER BLADE CAN CAUSE EXCESSIVE CUTTER VIBRATION, DAMAGE TO THE GEARBOX AND STRUCTURAL DAMAGE TO THE CUTTER. EXCESSIVE VIBRATION CAN CAUSE ROTATING PARTS TO BREAK AND FLY OFF THE CUTTER, RESULTING IN SERIOUS PERSONAL INJURY OR DEATH TO THE OPERATOR OR BYSTANDERS.

- Lift and support cutter by an approved means.

DANGER

LIFT AND SUPPORT CUTTER BY APPROVED MEANS ONLY. THE CUTTER WEIGHS OVER 800 POUNDS AND CAN CAUSE SEVERE PERSONAL INJURY OR DEATH IF IT FALLS DURING MAINTENANCE. SUPPORT THE CUTTER WITH A SUPPORTING DEVICE RATED FOR AT LEAST 1200 POUNDS.

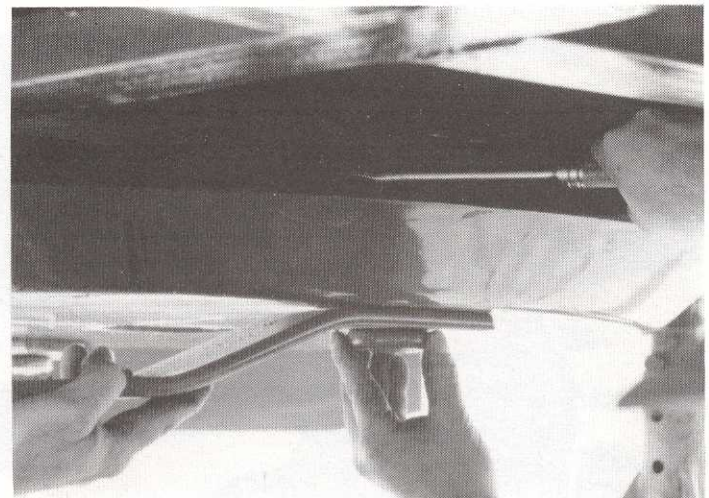


Properly Supported Cutter

- Check cutting blades for sharpness and condition. Replace worn cutter blades in pairs only. Sharpen dull cutter blades in pairs only.

Remove Blades

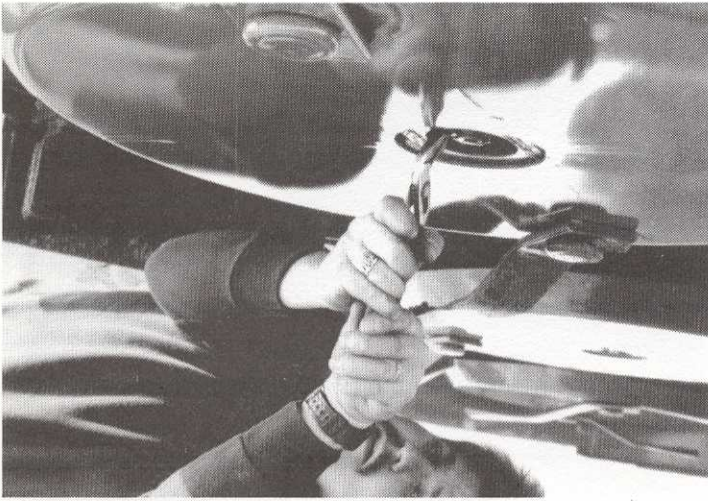
- Disconnect driveshaft from gearbox.
- Rotate blade bolt access cover (on top cutter deck near gearbox) from over access hole.
- Remove Blade bolt and blade.



Removing Blade Bolt

Remove Blade Holder

- Lock gearbox shaft by an approved means.
- Remove cotter pin from shaft.
- Back off set bolt.



Removing Blade Holder Cotter Pin

DANGER

THE BLADE HOLDER IS HEAVY AND CAN CAUSE SERIOUS PERSONAL INJURY OR DEATH IF IT FALLS ON THE OPERATOR. SUPPORT THE HOLDER BY AN APPROVED MEANS BEFORE PROCEEDING TO THE NEXT STEP.

- Remove set bolt and nut.
- Remove slotted nut, washer and blade holder.



Removing Blade Holder Nut

Replace Blade Holder

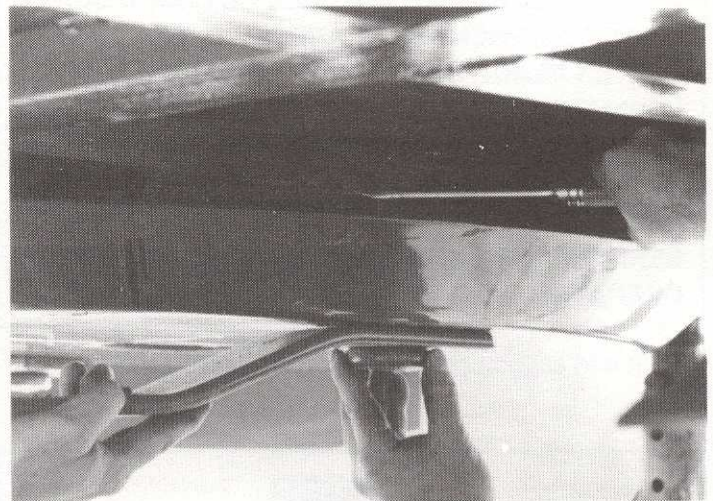
- Lift blade holder onto gearbox shaft.
- Install set bolt and nut.
- Install washer and slotted nut. Tighten the nut
- Install cotter pin on gearbox shaft.

DANGER

A LOOSE BLADE HOLDER COULD CAUSE THE GEAR-BOX SHAFT TO BREAK UNDER LOAD, CAUSING THE HOLDER TO FLY OUT FROM UNDER THE CUTTER. THIS COULD CAUSE DAMAGE TO THE CUTTER AND SERIOUS PERSONAL INJURY OR DEATH TO THE OPERATOR OR BYSTANDERS. BE SURE THAT THE SLOTTED NUT IS TIGHT AGAINST THE HOLDER AND THAT THE COTTER PIN IS IN GOOD CONDITION.

Replace Blades

- Rotate blade bolt access cover away from access hole in cutter deck.
- Position holder so that a blade mounting hole is directly beneath access hole.
- Position blade on holder.



Positioning Blade on Holder

- Install and tighten blade bolt.
- Turn blade holder to position second blade mounting hole is under access hole.
- Install and tighten blade bolt.
- Rotate blade bolt access cover over access hole.
- Install driveshaft.
- Remove supporting means and lower cutter.

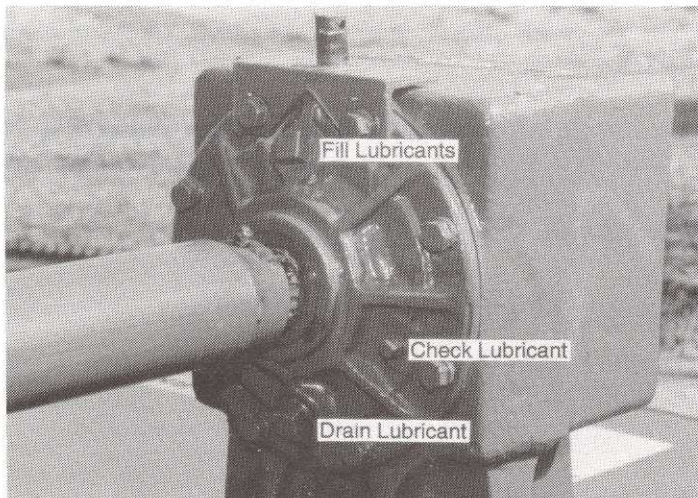
Gearbox Lube Level

After periods of heavy use (at least every 10 hours of operation), or after repairing the gearbox, or if lubricant leaks are observed, check gearbox lubricant levels.

CAUTION

DO NOT OPERATE THE CUTTER IF LUBRICANT LEVEL IS LOW. REPLACE DAMAGED SEALS OR GASKET AND ADD LUBRICANT TO THE CORRECT LEVEL. DO NOT OVERFILL.

- Position cutter on a level surface.
- Visual check, look for leak at shaft and open plate cover and check for oil in blade pan.
- Remove gearbox lubricant level inspection plug and check lubricant level. Lubricant should be at or near bottom of hole.
- If lubricant is low, remove gearbox filler plug and add SAE 85-140 lubricant until lubricant starts to flow from level inspection hole. DO NOT OVERFILL.
- Overfilling will induce leakage and cause damage to seals and gaskets.
- Replace lubricant level inspection plug and filler plug.



Gearbox Lubricant Plugs

GEARBOX

Gearbox Seals and Gasket

Check the gearbox for leaks around the seals and gasket daily when the cutter is in use. If a shaft seal or gasket is damaged, lubricant will leak out of the gearbox.

- Disconnect driveshaft from gearbox.
- Remove lubricant drain plug and allow all lubricant to drain.

Input Shaft Seal and Cover Gasket.

- Remove gearbox cover.
- Replace gearbox cover.
- Replace drain plug and refill with lubricant.

Output Shaft Seal

- Remove blade holder.
- Remove gearbox from top deck. Drain lubricant.
- Replace shaft seal.
- Install gearbox on top deck.
- Replace drain plug and refill with lubricant.
- Install blade holder.

Gearbox Mounting Hardware

Check that the gearbox is tight to the cutter top deck each day the cutter is in use. If it becomes loose, tighten the mounting bolts.

SLIP CLUTCH

DANGER

NEVER ATTEMPT ANY REPAIRS OR ADJUSTMENTS WITH THE TRACTOR ENGINE RUNNING OR THE POWER TAKE-OFF ENGAGED. ADJUSTMENT OF ROTATING PARTS WHILE TRACTOR ENGINE IS RUNNING CAN RESULT IN SERIOUS PERSONAL INJURY OR DEATH IF THE PTO ACCIDENTALLY ENGAGES.

See SLIP CLUTCH adjustment procedure in Section 1.

SAFETY SHIELDS

Check safety shields before each use. Check that all attaching hardware is tight. Replace any length of chain that has missing or damaged links. Replace rubber belting if damaged. If cutter has a haygate, after cutting hay, replace gate making sure all nuts and bolts are in place and tight. To keep haygate bolts in good condition when operating without gate, replace nuts and bolts and tighten.

TAIL WHEEL (LIFT TYPE)

Replace Wheel

CAUTION

ADEQUATELY SUPPORT THE CUTTER AND THE WHEEL BEFORE REMOVING THE AXLE. BOTH THE WHEEL AND THE CUTTER ARE HEAVY AND COULD CAUSE DAMAGE TO THE CUTTER OR SERIOUS PERSONAL INJURY IF DROPPED.

- Remove wheel axle nuts and axle.
- Remove wheel.
- Position wheel in pivot yoke.
- Install wheel axle and nuts.

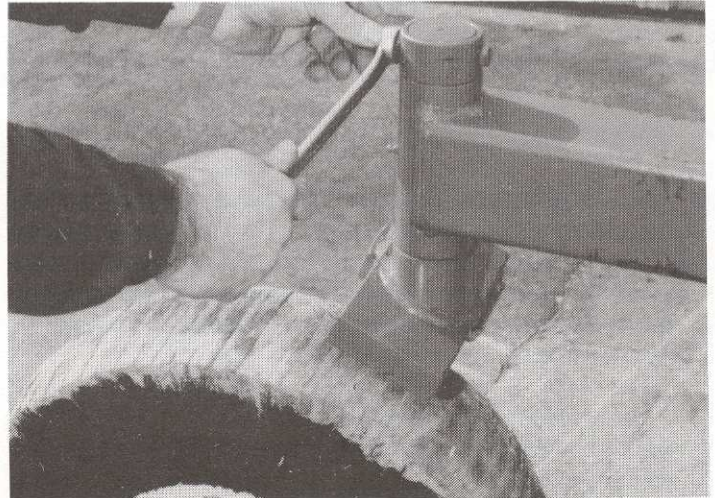
Replace Pivot

- Raise and support cutter using approved means. Support cutter high enough so that pivot shaft can be removed from tail wheel pivot bracket.

CAUTION

ADEQUATELY SUPPORT THE CUTTER AND THE TAIL WHEEL ASSEMBLY BEFORE REMOVING BOLT. BOTH THE TAIL WHEEL AND THE CUTTER ARE HEAVY AND COULD CAUSE DAMAGE TO CUTTER OR SERIOUS PERSONAL INJURY IF DROPPED.

- Remove collar bolt, nut and collar on top of pivot bracket.



Removing Tail Wheel Pivot Collar Bolt

- Remove pivot from pivot bracket.
- Install replacement pivot to bracket.
- Install collar, collar bolt and nut on pivot on top of pivot bracket.
- Lubricate with Lithium EP grease (See lubrication, Section 3.)

WHEEL BEARINGS (PULL TYPE)

- Remove dust cap from wheel hub.
- Clean out old grease from dust cap.
- Pack dust cap with clean wheel bearing grease.
- Install dust cap.

HARDEE LIMITED WARRANTY

Hardee warrants its **Equipment** (* Except Hydraulic Mowers) for one year to the original non-commercial, non-governmental, or non-municipal purchaser. And warrants for 90 days to the original commercial, industrial or municipal purchaser, that the goods are free from defects in material or workmanship.

Special OMNI Gearbox Warranty:

OMNI Gearboxes are warranted for a total of

3 years to the original non-commercial user and,
1 year to the commercial user.

This limited warranty does not apply to any part of the goods which has been subjected to improper or abnormal use, negligence, alteration, modification, or accident, damaged due to lack of maintenance, wrong oil or lubricants, or which has served its normal life.

The Warranty Card **must** be filled out and returned **within** 30 days of purchase. **NO** warranty will be allowed without a properly completed and returned warranty card.

“Our obligation under this warranty shall be limited to repair or replacement of any part or parts of this implement which in our judgement shows evidence of such defect and provided further that said parts shall be removed and returned by the owner at the owner’s expense to Hardee by EVH Manufacturing Co. LLC, Loris, SC, through an authorized dealer, transportation prepaid, free and clear of liens or encumbrances.

This warranty shall not include normal wear items.

Changes or alterations to the implement made without the **written** authorization of the manufacturer, will render this warranty void.

This warranty does not obligate this company to bear any labor costs in replacement of defective parts.

Hardee by EVH Manufacturing Co., LLC. reserves the right to make changes or improvements in its equipment at any time, with the express understanding that such changes or improvements do not impose any obligation of the company to install such changes or improvements on implements previously manufactured.

IMPLIED WARRANTIES: You may have some implied warranties. For example, you may have an implied warranty of merchantability (that the unit is reasonably fit for the general purpose for which it was sold) or an implied warranty of fitness for a particular purpose (that the unit is suitable for your special purposes). This special purpose must be specifically disclosed to Hardee itself, and not merely to the dealer before your purchase, and Hardee itself, not just the dealer must approve, in writing that the special purpose is warrantable.

These implied warranties do not apply at all if you use your equipment for business or commercial use.

*See separate Hydraulic Mower Limited Warranty for Hydraulics



HARDEE



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